



CITY OF SAN ANTONIO  
METROPOLITAN HEALTH DISTRICT

# Heat Emergency Response Plan



**Twentieth Edition – June 14, 2019. This edition supersedes all previous editions.  
Health Alert: Important information to review and implement.**

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Tracked Changes to Heat Emergency Response Plan		
Date of Change	Name of Person Making Change	What Was Changed?
3/4/2016	George Perez	Date change 1998 - 2013 Appendix H - pg33, child heat deaths; Greater than > to Greater than or equal to ≥
3/10/2017	George Perez	Appendix H-pg33, child heat deaths Pgiii Health Authority to Health Director
3/20/2018	George Perez	Appendix H-pg33, child heat deaths numbers
5/9/2018	George Perez & Marty Garcia	Appendix L – Added another column on resources with program information.
2/25/2019	George Perez & Marty Garcia	Appendix H-pg33, child heat deaths numbers
6/14/2019	George Perez & Marty Garcia	Added additional cooling center information to Levels II & I, updated links and added Appendix P

## **PREFACE**

### **CITY OF SAN ANTONIO, BEXAR COUNTY AND SURROUNDING COMMUNITIES**

This plan provides a guide for preparing for, responding to, and recovering from an extreme heat weather event. The City's San Antonio Metropolitan Health District (Metro Health) in coordination with the Office of Emergency Management (OEM) is responsible for implementing this plan during an event. This plan is "only" a guide to assist the City and community partners by providing basic information, checklists, and impact triggers as well operational and situational objectives during an extreme heat weather event. Every disaster presents unique challenges that require quick and decisive actions that may or may not be expressed in this plan. City leadership and designated staff have the discretion and flexibility to modify or update this plan during an event.

Providing relief from the heat and an adequate supply of liquids (especially water) are the most critical interventions needed to assist persons in our community in safely coping with a heat wave. With the 1998 prolonged heat spell and the outlook for more high temperatures, community leaders realized it was necessary to evaluate the local situation and share information. During numerous meetings, local leaders identified the need for a heat relief plan. A community meeting held on August 5, 1998, led by former Bexar County Judge Cyndi Taylor Krier, resulted in the development of this Community-Based Heat Relief Plan. This heat plan provides information on how individuals can prepare for, prevent, recognize, and cope with heat-related health problems.

This heat plan also provides a list of local agencies which will furnish heat-related assistance during extreme heat weather conditions. This Heat Plan serves as the basis of a more comprehensive "Extreme Weather Plan" and supplements the City's Office of Emergency Management basic plan and relevant annexes.

The Heat Plan was developed by representatives of the private and public sectors including the City of San Antonio, Bexar County, Greater Bexar County Community of Cities, Alamo Area Council of Governments (AACOG), United Way of San Antonio and Bexar County, Texas Department of State Health Services Region 8, Christian Senior Services, Greater San Antonio Community of Churches, the American Red Cross, the Salvation Army, Voluntary Organizations Active in Disasters, Greater San Antonio Hospital Council, Bexar County Medical Society, University Health System, and the University of Texas Health Science Center at San Antonio. This heat plan is updated, published and distributed annually by the San Antonio Metropolitan Health District in coordination with the San Antonio Office of Emergency Management (SAOEM), Bexar County Office of Emergency Management and National Weather Service (NWS).

This Heat Plan is also a tool for informing public officials, outreach workers, community partners, social service providers and residents on the availability of services provided during hot weather. It is encouraged for individuals to share this plan with anyone who might utilize this information.

This Heat Plan was designed to be used as a guide and meant to be flexible to meet safety concerns and requirements deemed appropriate by the San Antonio Metropolitan Health District's Public Health Director. Although this plan outlines general guidelines for various readiness levels, the Public Health Director may determine to modify this plan as necessary during an event to increase public awareness, lessen adverse public health impacts within the community, and/or meet community needs during adverse weather patterns related to heat. Any changes to this plan authorized by the Health Director will be immediately communicated to agencies participating in heat relief efforts, and the public will be notified through media messages and alerts posted on the Metro Health website at (<http://www.sanantonio.gov/health>) and the San Antonio Office of Emergency Management's website (<http://www.sanantonio.gov/emergency>). Information also will be available on Metro Health and SAOEM Facebook and Twitter pages.

Users of this plan are encouraged to direct questions to the appropriate identified agencies. Agencies which serve a pre-defined population, such as community facilities, independent school districts, private schools, assisted living facilities, child care facilities should develop their own policies and procedures to augment this plan. This plan cannot address the specific needs or requirements for each agency. Agencies should be prepared to implement their specific heat related measures in addition to this plan.

For additional information or comments on this plan, please contact:

San Antonio Metropolitan Health District, Public Health Emergency Coordinator

(W): (210) 207-8752

(FAX): (210) 207-2173

Or

San Antonio Office of Emergency Management

(W): (210) 206-8580

(FAX): (210) 206-8570

# TABLE OF CONTENTS

INDEX OF APPENDICES .....	vii
INTRODUCTION.....	ix
EMERGENCY MANAGEMENT POLICY .....	2
HEAT PLAN IMPLEMENTATION.....	3
INDIVIDUAL PROTECTIVE MEASURES AND RESPONSE.....	4
 LEVEL IV READINESS - NORMAL ROUTINE CONDITIONS .....	 7
 LEVEL III READINESS - INCREASED READINESS .....	 8
1. OPERATIONAL OBJECTIVES.. .....	8
2. REPORTING SYSTEMS.....	9
 LEVEL II READINESS - HIGH READINESS .....	 10
1. OPERATIONAL OBJECTIVES .....	10
2. REPORTING SYSTEMS.....	10
 LEVEL I READINESS - MAXIMUM READINESS .....	 12
1. OPERATIONAL OBJECTIVES .....	12
2. REPORTING SYSTEMS.....	12
3. SITUATIONAL OBJECTIVES / SHELTERS AND COOLING FACILITIES .....	12
 DEACTIVATION.....	 14
COORDINATION WITH EXISTING EMERGENCY MANAGEMENT PLANS .....	14

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## INDEX OF APPENDICES

Appendix A:	<u>Heat Outlook News Release</u> , Level III, San Antonio Metropolitan Health District
Appendix B:	<u>Heat Advisory News Release</u> , Level II, San Antonio Metropolitan Health District
Appendix C:	<u>Excessive Heat Warning News Release</u> , Level I, San Antonio Metropolitan Health District
Appendix D:	<u>Tips for Preventing Heat Related Illnesses</u> ; Centers for Disease Control and Prevention
Appendix E:	<u>Heat Related Athletic Participation Information</u> ; University Interscholastic League
Appendix F:	<u>Heat Injury Precautions Taken for Special Events</u> ; San Antonio Metropolitan Health District.
Appendix G:	<u>Protect Your Pet From Hot Weather</u> ; COSA Animal Care Services and Humane Society of San Antonio.
Appendix H:	<u>Hot Cars Perilous for Children and Pets in Summer</u> ; Accuweather
Appendix I:	<u>Links for additional information related to heat</u>
Appendix J:	<u>Project COOL &amp; Use of Portable Electric Fans</u>
Appendix K:	<u>Heat Index Chart</u>
Appendix L:	<u>Community Resources</u>
Appendix M:	<u>COSA Extreme Heat Staffing Matrix</u>
Appendix N:	National Weather Service Excessive Heat Warning/Advisory Criteria
Appendix O:	<u>CDC Frequently Asked Questions (FAQ) About Extreme Heat</u>
Appendix P:	Cooling Center List 2019

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## INTRODUCTION

Excessive Heat Events (EHEs) are common in the San Antonio area and South Texas. These events are public health threats because they often increase the number of daily deaths (mortality) and nonfatal adverse health outcomes (morbidity) in affected populations (*United States Environmental Protection Agency, 2008*). Hundreds of people die every year from heat-related illnesses. A severe heat wave hit the United States in the summer of 1980. Heat contributed to the deaths of approximately 1,700 people that summer. Texas alone had 78 people die which was 4.5% of the total deaths that year. In 2012, there were 531 deaths nationally due to heat. Twenty four of those deaths occurred in Texas which again was 4.5% of the total deaths.

In the summer of 1998, the National Weather Service declared numerous communities in North and South Texas to be under an extreme heat advisory. Throughout Texas, high humidity coupled with temperatures in the high 90's and above caused significant elevations in the heat indices. In addition to the extremely hot and sultry afternoons, the ambient overnight temperatures rarely dropped below 80°F during the summer of 1998. These conditions produced critical heat waves and pushed the heat index into the Extreme Hot Classification which entails a heat index of 130°F or greater. According to the Associated Press, 124 Texans died during this heat wave of which 3 were from Bexar County. History has shown that these conditions are common for South Central Texas.

Summer heat waves bring unusually high temperatures that may last for days or weeks. Although, the human body has effective systems to cool itself, under some conditions, these mechanisms are not enough. In such cases, a person's body temperature may rise rapidly. Very high body temperatures can cause severe damage to the brain and other vital organs. Maintaining a consistent internal body temperature, which is generally 98.6°F, is essential to normal physical functioning (*The American Physiological Society, 2008*).

Several factors affect the body's ability to cool itself during extremely hot weather. When humidity is high, perspiration does not evaporate as quickly preventing adequate release of heat from the body. Other factors that affect the body's cooling mechanism include age, obesity, fever, dehydration, heart disease, poor circulation, sunburn, caffeine, as well as drug and alcohol use. Those at highest risk for death or injury from heat are the elderly, socially isolated individuals (homebound, homeless), the physically disabled, those with chronic medical conditions, infants, those taking certain medications, and individuals that do not have access to air conditioning or fans during the hottest hours of the day.

Metro Health and the SAOEM urge people to be especially mindful of summertime activity whether playing or working. To prevent heat-related illnesses, activities must be balanced with measures that aid the body's cooling mechanisms. For discharge purposes, hospitals should be mindful of the heat conditions at a patient's residence. Friends and neighbors of the elderly are urged to check with them frequently during this time. If no air conditioning is available, as much ventilation as possible is recommended. During extreme heat conditions, fans should be utilized to increase maximum efficiency of air movement within homes. Individuals who are most at risk are advised to seek air conditioning, if possible, in public facilities such as stores, malls, theaters, etc. Also, residents should drink non-alcoholic and decaffeinated beverages as often as possible.

# EMERGENCY MANAGEMENT POLICY

It is the responsibility of the City of San Antonio and Bexar County to provide emergency management for the residents in their jurisdiction. Emergency management all-hazard plans have been developed, exercised, and put into action during numerous events such as extreme weather conditions, flooding, hurricanes, hazardous material spills, and special events.

These plans provide for timely response efforts with accompanying utilization of a variety of resources throughout the City of San Antonio and Bexar County. Response efforts are accomplished through careful coordination with relief agencies, private partners and the Emergency Management Offices of the City of San Antonio and Bexar County.

It should be noted that many efforts are undertaken each year in this community to provide relief to people during extreme weather conditions. These efforts are usually conducted during extreme weather conditions that are not declared emergencies. Any future emergency relief plans must not interfere or impede with the close links that have already been established by the Office of Emergency Management with relief agencies such as the American Red Cross, independent school districts, and the Salvation Army.

## Levels of Readiness:

- Level IV** - Readiness - Routine - Normal
- Level III** - Increased Readiness
- Level II** - High Readiness
- Level I** - Maximum Readiness

# HEAT PLAN IMPLEMENTATION

The following is a list of readiness levels with triggers as designated by the National Weather Service in coordination with the San Antonio Metropolitan Health District and the San Antonio Office of Emergency Management. Readiness levels which include operational and situational objectives are subject to modification by the Director of the San Antonio Metropolitan Health District or the City's Emergency Manager. Every severe weather event presents unique challenges they may require deviation from this plan at the discretion of City leadership. This plan is a guide to assist in mitigating, preparing for, responding to, and recovering from an extreme heat weather event.

The Director of the San Antonio Metropolitan Health District, in coordination with the Emergency Management Offices of the City of San Antonio and Bexar County and the National Weather Service will activate and manage this community-based Heat Plan. Metro Health will implement an "Excessive Heat Event" notification and response program to increase public awareness and lessen adverse health impacts according to the readiness levels described below.

**Readiness Level IV:** Normal weather conditions.

**Readiness Level III (Increased Readiness):** Based upon the National Weather Service forecasts of temperatures  $\geq 100^{\circ}\text{F}$  or when the heat index is expected to be within the  $90^{\circ}\text{F}$ - $108^{\circ}\text{F}$  range for two successive days, the San Antonio Metropolitan Health District will notify the community of a **Heat Outlook**.

**Readiness Level II (High Readiness):** When the National Weather Service issues a Heat Advisory with a daytime heat index  $\geq 108^{\circ}\text{F}$  or air temperature  $\geq 103^{\circ}\text{F}$ , the San Antonio Metropolitan Health District will issue a **Heat Advisory**. In order to provide flexibility and as a pre-emptive safety measure, Metro Health may also activate Level II based upon surveillance, analysis and information received from designated monitoring systems.

**Readiness Level I (Maximum Readiness):** When the National Weather Service issues an Excessive Heat Warning with a daytime heat index reaching  $\geq 113^{\circ}\text{F}$  or air temperature  $\geq 105^{\circ}\text{F}$ , the San Antonio Metropolitan Health District will also issue an **Excessive Heat Warning**. In order to provide flexibility and as a pre-emptive safety measure, Metro Health may also activate Level I based upon surveillance, analysis and information received from designated monitoring systems.

The **Heat Index Chart** (see Appendix K, page 39) is a calculation based on expected heat discomfort as a result of a combination of dry ambient air temperatures and relative humidity.

The following table establishes classifications for four Heat Index/Apparent Temperature ranges. Each classification has an associated danger and indicates the risk to the body from continued exposure to the excessive heat.

## **Heat Index/Apparent Temperature Stress Index**

<b>Classification</b>	<b>Heat Index/Apparent Temperature</b>	<b>Dangers</b>
Extremely Hot	≥130°F or Higher	Heat/Sunstroke <b>HIGHLY LIKELY</b> with continued exposure
Very Hot	105°F -130°F	Sunstroke, heat cramps, or heat exhaustion <b>LIKELY</b> , and heat stroke <b>POSSIBLE</b> with prolonged exposure and/or physical activity
Hot	90°F -105°F	Sunstroke, heat cramps, or heat exhaustion <b>POSSIBLE</b> with prolonged exposure and/or physical activity
Very Warm	80°F -90°F	Fatigue <b>POSSIBLE</b> with prolonged exposure and/or other activity

**Source: NOAA**

The San Antonio Metropolitan Health District's Public Information Officer, in coordination with the City's Communication and Public Affairs Department, San Antonio Office of Emergency Management and Bexar County Office of Emergency will initiate an Extreme Heat Plan Awareness Campaign each spring and will continue throughout the summer when temperatures are at their highest. The "BEAT THE HEAT" campaign will target the public using mass media outlets, social media and printed material and products. In addition, this campaign effort will augment, support and promote the Fire Department and Human Service Department's Project Cool Campaign/Press Conference which begins the first week of June each year.

The campaign will include a specific goal of reaching the vulnerable population and those with functional and special needs. In order to do this Metro Health, SAOEM and Bexar County office of Emergency Management will partner with organizations such as VIA, United Way, American Red Cross and San Antonio Meals on Wheels in order to promote the campaign and reach these critical populations.

As resources allow, other avenues for providing information concerning the Heat Plan such as inserts into SAWS or CPS monthly billing statements as well as information bulletins on VIA buses and in local theaters may be used.

Metro Health, SAOEM and the Bexar County Office of Emergency Management will coordinate frequent (weekly during peak heat conditions) communication and planning meetings/teleconferences among various City and community partners to brief information concerning heat projections, heat illnesses and injuries and other information as required. If required, the planning meetings will coordinate and determine which and when facilities will be made available beyond normal operating hours to persons in need of respite from the heat.

The Extreme Heat Plan Awareness Campaign should include the following information:

### **INDIVIDUAL PROTECTIVE MEASURES AND RESPONSE**

The best defense against heat- injury is prevention:

- Air-conditioning is the number one protective factor against heat-related illness and death. During conditions of extreme heat, spend time in locations with air-conditioning such as shopping malls, public libraries, or public health sponsored heat-relief cooling areas.
- Residents in need of respite from the heat will be encouraged to visit the public libraries, recreation centers, senior centers and shopping centers/malls during normal operating hours.

- Stay adequately hydrated regardless of activity level.
- Wear lightweight, light-colored, loose-fitting clothing and appropriate sunscreen.
- Avoid alcohol and caffeine intake.
- Avoid heavy and/or hot foods—they add heat to your body.
- Limit outdoor activities during the heat of the day. Exposure to full sunshine can increase Heat Index Values by up to 15°F.
- Monitor those at high risk such as the elderly, infants, young children, and people who are physically ill or have chronic disease such as heart disease or high blood pressure.
- Do not leave children or pets unattended in a closed, parked vehicle.

**Acclimatization** is important for each individual. The primary benefit of heat acclimatization is improved tolerance of exercise in the heat, evident as a reduction of the incidence or severity of symptoms of heat illness, and increased work output concurrent with reduced cardiovascular, thermal, and metabolic strain (*Encyclopedia of Sports Medicine and Science, March 1998*).

**Heat exhaustion** a milder form of heat-related illness can be the result of not being properly acclimated to extreme heat, failure to take preventive measures, or the severity of heat. Symptoms may include the following:

- Heavy sweating
- Paleness
- Muscle cramps
- Tiredness
- Weakness
- Dizziness
- Headache
- Nausea or vomiting
- Fainting

The skin may be cool and moist. The pulse rate will be fast and weak, and breathing will be fast and shallow. If heat exhaustion is untreated, it may progress to heat stroke. The following actions should be taken:

- Drink cool, nonalcoholic beverages
- Rest
- Take a cool shower, bath, or sponge bath
- Seek an air-conditioned environment

Individuals should seek medical attention if symptoms worsen or last longer than one hour.

**Heat stroke** is the most serious heat-related illness and can lead to death or serious disability. Warning signs vary but may include the following:

- An extremely high body temperature (above 103°F)
- Red, hot, and dry skin (no sweating)
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness

Heat stroke is a serious life-threatening emergency. The following actions should be taken

**immediately:**

- Have someone call for immediate medical assistance while someone begins cooling the victim.
- Get the victim to a shady and cool area.
- Cool the victim rapidly using whatever methods are available. For example:
  - Immerse the victim in a tub of cool water.
  - Place the person in a cool shower.
  - Spray the victim with cool water from a garden hose.
  - Sponge the person with cool water.
  - If the humidity is low, wrap the victim in a cool, wet sheet and fan him or her vigorously.
- Monitor body temperature and continue cooling efforts until the body temperature drops to 101 °F -102°F.
- If emergency medical personnel are delayed, call the hospital emergency room for further instructions.
- The City's Department of Human Services will request donations of new 18-inch box fans for seniors who are 60 years of age or older for the Project COOL program. Anyone wishing to donate a fan can drop the item off at any San Antonio Fire Department station (except the Airport location). Anyone wishing to make a monetary donation can send or deliver a check to:

Project Cool c/o Catholic Charities  
202 W. French Place  
San Antonio, TX 78212

- Seniors in need of a fan can call **2-1-1**, which is the Texas/United Way Help Line, at any time, to request a box fan by phone.

## Level IV Readiness – Normal/Routine Conditions

**Impact Trigger** occurs during normal, non-threat weather conditions.

### **OPERATIONAL OBJECTIVES:**

- Director of the San Antonio Metro Health Department determines this readiness level in coordination with the City's Emergency Manager.
- Metro Health's Public Health Emergency Preparedness Division, San Antonio Office of Emergency Management, Bexar County Office of Emergency Management in coordination with the National Weather Service will maintain situational awareness and specific monitoring of weather conditions.
- Metro Health will begin to monitor temperature (°F), relative humidity (%), and dew point on a daily basis (including weekends) and determine the heat index based on information provided by the National Weather Service. Temperature and heat index monitoring and forecasting will be conducted and charted in spreadsheet form from mid March through mid October.
- Metro Health will begin to monitor heat related illnesses, injuries and deaths. Data will be depicted in chart and graph format to indicate the number of illnesses, injuries and deaths in correlation with the heat index.
- SAOEM will develop and maintain a database of potential cooling centers, addresses and hours of operations.
- Readiness actions may include regular situational meetings, a review of the heat plan and recourse status, and determining availability, assignments and contact information.
- Conduct Extreme Heat Plan Awareness Campaign to inform the public the risk and prevention tools in preparing for an extreme heat weather event.

## Level III Readiness - Increased Readiness

***Impact Trigger*** occurs when the National Weather Service forecasts of temperatures greater than 100°F or when the heat index is expected to be within the 90°F - 108°F range for two successive days. The San Antonio Metropolitan Health District will notify the community of a Heat Outlook.

### **OPERATIONAL OBJECTIVES:**

- Metro Health will coordinate with the SAOEM and will notify participating emergency management partners and social service agencies when Level III readiness is in effect (Appendix A).
- Metro Health will continue to monitor temperature (°F), relative humidity (%), and dew point on a daily basis (including weekends) and determine the heat index based on information provided by the National Weather Service. Temperature and heat index monitoring and forecasting will be conducted and charted in spreadsheet form from mid March through mid October.
- Metro Health will continue to monitor heat related illnesses, injuries and deaths. Data will be depicted in chart and graph format to indicate the number of illnesses, injuries and deaths in correlation with the heat index.
- SAOEM will continue to develop and maintain a database of potential cooling centers, addresses and hours of operations. A web based interactive map will be developed and loaded onto the SAOEM website in order for individuals to identify the nearest cooling center.
- SAOEM will provide database of cooling centers to VIA. VIA will conduct analysis on adjusting routes and schedules to accommodate transportation requirements for individuals wishing to go to a cooling center location.
- Metro Health in coordination with the SAOEM, Department of Human Services, and the Office of Communication and Public Affairs for news releases, interviews and public messages through the City's Government Access Channel, and public service announcements (PSAs) on heat injury prevention and awareness as well as Project Cool.
- Additional information will be available on Metro Health's and the SAOEM's WebPages, Facebook, Twitter, and other social media tools.
- Education Service Center Region 20 will be notified to advise area school districts to take precautions and to refer school districts to both the Heat Stress and Athletic Participation Information located in the UIL coaches' manuals (Appendix E) and guidelines for outdoor strenuous activities (Appendix F).
- Readiness actions will include regular situational meetings with governmental and non governmental organizations and agencies to review heat plan and recourse status in order to be proactive in implementing measures to help protect the public during extreme heat.

- **As deemed appropriate, the San Antonio Metropolitan Health District, Public Health Authority, in coordination with the City's Office of Emergency Management, may implement LEVEL II objectives.**

## **REPORTING SYSTEMS**

- Metro Health will monitor heat related illnesses on those service calls/transport by San Antonio Fire/EMS.
- The Bexar County Medical Examiner's Office will report deaths related to heat illness to Metro Health.
- Upon reaching Level 1, area hospitals can voluntarily report heat related illnesses to enhance incident response.
- Metro Health will monitor area medical treatment facilities as warranted by hot weather conditions maintaining surveillance on the well-being of the community.

## Level II Readiness - High Readiness

***Impact Trigger*** occurs when the National Weather Service (NWS) issues a Heat Advisory with a daytime heat index  $\geq 108^{\circ}\text{F}$  or air temperature  $\geq 103^{\circ}\text{F}$ .

### **Operational Objectives:**

- The San Antonio Metropolitan Health District in coordination with the Office of Emergency Management will issue a Heat Advisory for the San Antonio area.
- All Objectives in Levels IV and III will continue. Additional Extreme Heat Awareness information will be distributed.
- In order to provide flexibility and as a pre-emptive safety measure, Metro Health in coordination with the City's Office of Emergency Management may declare Level II Readiness level if the conditions are less than the impact trigger based on other criteria provided by surveillance, analysis and information received from designated monitoring systems.
- **As deemed appropriate, the San Antonio Metropolitan Health District, Public Health Authority, in coordination with the City's Office of Emergency Management, may implement LEVEL I objectives.**
- **Metro Health will disseminate information on LEVEL I to allow the public to prepare in case LEVEL I is implemented.**
- **Cooling centers are available during normal business hours which include some Public Libraries, Senior Centers, Community Centers, and potentially other city facilities.**

### **Shelters and Daytime Cooling Facilities**

- Overnight Locations:  
Haven for Hope:  
(210)-220-2100 Mon-Fri, 8:00 a.m. – 5:00 p.m.  
(210)-220-2500 after hours
- Daytime Locations: Cooling areas available for relief from the heat.
  - Local Malls and Shopping Centers
  - Public Libraries
  - Senior Citizen Nutrition Sites
  - Learning and Leadership Development Centers
  - Other Public Facilities: gyms, swimming pools
  - Additional facilities/areas could be identified depending upon availability
  - [www.saoemprepare.com/BeInformed/NaturalDisasters/Heat/CoolingCenters](http://www.saoemprepare.com/BeInformed/NaturalDisasters/Heat/CoolingCenters) (link to current locations)

## **REPORTING SYSTEMS**

- Metro Health will continue to monitor heat related illnesses on those service calls/transportations by San Antonio Fire/EMS.
- The Bexar County Medical Examiner's Office will continue to report deaths related to heat illness to Metro Health.
- Upon reaching Level 1, area hospitals may continue to voluntarily report heat related illnesses to enhance incident response.
- Metro Health will continue to monitor area medical treatment facilities as warranted by hot weather conditions maintaining surveillance on the well-being of the community.

## Level I Readiness - Maximum Readiness

**Impact Trigger** occurs when the National Weather Service (NWS) issues an Excessive Heat Warning with a daytime heat index  $\geq 113^{\circ}\text{F}$  or air temp  $\geq 105^{\circ}\text{F}$ .

### Operational Objectives:

- The San Antonio Metropolitan Health District in coordination with the Office of Emergency Management will issue an Excessive Heat Warning for the San Antonio area.
- All Objectives in Levels IV, III and II will continue. Additional Extreme Heat Awareness information will be distributed.
- **In order to provide flexibility and as a pre-emptive safety measure, Metro Health in coordination with the City's Office of Emergency Management may declare Level I Readiness level if the conditions are less than the impact trigger based on other criteria provided by surveillance, analysis and information received from designated monitoring systems.**
- Public buildings and cooperating private buildings with air conditioning (shopping malls, movie theaters) will be designated as public cooling areas by the City's Emergency Manager. Specific locations will be released via the media, Metro Health and OEM websites.
- As resources allow, Metro Health and community partners will directly contact and evaluate the environmental conditions and health status of known-high risk individuals and locations likely to have concentrations of these individuals.
- Metro Health and community partners will increase outreach efforts to the homeless and establish provisions for their removal to cooling facilities.
- Cooling stations will have extended hours when approved by City ~~Manager's Office of San Antonio Leadership~~. City Departments will work with Metro Health to determine extended hours. See Appendix P.

### Situational Objectives:

#### Shelters and Daytime Cooling Facilities

- Overnight Locations:  
Haven for Hope:  
(210)-220-2100 Mon-Fri, 8:00 a.m. – 5:00 p.m.  
(210)-220-2500 after hours
- Daytime Locations: Cooling areas available for relief from the heat.
  - Local Malls and Shopping Centers
  - Public Libraries

- Senior Citizen Nutrition Sites
- Learning and Leadership Development Centers
- Other Public Facilities: gyms, swimming pools
- Additional facilities/areas could be identified depending upon availability
- [www.saoemprepare.com/BeInformed/NaturalDisasters/Heat/CoolingCenters](http://www.saoemprepare.com/BeInformed/NaturalDisasters/Heat/CoolingCenters) (link to current locations)

## **REPORTING SYSTEMS**

- Metro Health will continue to monitor heat related illnesses on those service calls/transport by San Antonio Fire/EMS.
- The Bexar County Medical Examiner's Office will continue to report deaths related to heat illness to Metro Health.
- Upon reaching Level 1, area hospitals may continue to voluntarily report heat related illnesses to enhance incident response.
- Metro Health will continue to monitor area medical treatment facilities as warranted by hot weather conditions maintaining surveillance on the well-being of the community.

### **Public Transportation to Shelters and Daytime Cooling Facilities**

- SAOEM will coordinate with VIA to promote public transport systems.
- SAOEM will consider other strategies as necessary.

# DEACTIVATION

## Operational Objectives:

- The San Antonio Metropolitan Health District will deactivate Levels I & II by electronic message to the City of San Antonio/Bexar County Emergency Management Office, community partners, and media outlets.
- In each of the activation notices, a disclaimer has been included that states “Readers are encouraged to contact the National Weather Service (NWS) for specific weather conditions at 830-606-3617 or visit the NWS website at <http://www.weather.gov/sanantonio>”
- During the warmer months of the year, a **Heat Outlook (Level III) will not be deactivated until City leadership in coordination with the National Weather Service deems that extreme heat conditions are over for the year.**
- Conduct After Action Report (ARR) to determine best practices and improvements in preparation for the next year. Update Heat Plan.
- This document supplements existing emergency management annexes for the City of San Antonio and Bexar County, and will be coordinated with the Texas Department of State Health Service’s regional office.

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## APPENDIX A

**For Immediate Release**  
**Contact Heat Plan Representative: 207-2145**

### *News Release*

#### **City of San Antonio Advises of Heat Outlook – Readiness Level III**

San Antonio Metropolitan Health District is notifying the community of a Heat Outlook. Based upon the National Weather Service forecasts of temperatures  $\geq 100^{\circ}\text{F}$  or a heat index within the  $90^{\circ}\text{F}$  -  $108^{\circ}\text{F}$  range for two successive days, the City of San Antonio advises the community of a Heat Outlook – Readiness Level III.

During the warmer months, excessive heat temperatures are a fact of life in South Texas. Excessive heat conditions can result in direct and adverse health consequences, particularly to the very young and to the elderly. The following precautions should be followed during this time to reduce heat-related injuries.

- Drink non-alcoholic and caffeine-free liquids, such as water and juices.
- Be aware of people at high risk, such as the elderly, infants and children up to 4 year of age, someone who is overweight, or someone on medication.
- Rest frequently in a shady area.
- Do not leave infants, children or pets unattended in a parked car (even if the windows are down or the air conditioning is on) or other hot environment.
- Ask your physician whether you are at particular risk because of a medication you are taking. Remember to leave fresh water in the bowl for pets kept outdoors and provide as much shade as possible where the pets are kept. Change the water frequently to prevent mosquitoes from breeding.

A deactivation notice is only sent to the Emergency Management Offices and to the media. The San Antonio Metropolitan Health District encourages readers to contact the National Weather Service for the most current weather conditions at 830-606-3617 or visit <http://www.weather.gov/sanantonio> for current hourly weather. **During the warmer months of the year, the Heat Outlook (Readiness Level III) will not be deactivated.**

#### **For Further Assistance:**

If you have an emergency, call:	911
For utility assistance, call CPS:	210-353-2222
For fan assistance, call the United Way Help Line:	211
For non-emergency information, call:	311 (Hours 7 a.m. – 11 p.m.)

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## APPENDIX B

**For Immediate Release**  
**Contact Heat Representative: 207-2145**

### *News Release*

#### **City of San Antonio Advises of Heat Advisory - Readiness Level II**

San Antonio Metropolitan Health District is notifying the community of a Heat Advisory. When the daytime heat index is  $\geq 108^{\circ}\text{F}$  or air temperature is  $\geq 103^{\circ}\text{F}$ , the City of San Antonio advises the community of a Heat Advisory – Readiness Level II.

During the warmer months, excessive heat temperatures are a fact of life in South Texas. Excessive heat conditions can result in direct and adverse health consequences, particularly to the very young and to the elderly.

Residents and visitors are warned that the danger of heat-related injuries and the potential for fatalities increases under a Level II alert. Anyone who does not live in a home with air conditioning or cannot visit one during the severest heat of the day (typically between 2 p.m. – 7 p.m.) is encouraged to visit an air-conditioned facility such as a shopping mall or library, or call one of the community resources below to seek air-conditioned relief.

The following health precautions continue to be recommended under a Level II alert to avoid dehydration, heat-related illnesses or more severe consequences, especially among vulnerable populations such as the elderly and young children.

- Drink non-alcoholic and caffeine-free liquids, such as water and juices.
- Be aware of those at high risk, such as the elderly, infants and children up to 4 years of age or individuals who are overweight. Check on elderly parents, relatives, acquaintances and neighbors as often as possible.
- Do not leave infants, children, the elderly or pets unattended in a parked car (even if the windows are down or the air conditioning is on) or any other hot environment.
- Plan to exercise and do other strenuous activities early or late in the day when it is cooler or utilize air-conditioned facilities.
- Use an umbrella, hat or sunscreen to protect your skin from the sun, and wear loose-fitting and light clothing to help heat escape away from your body. Rest frequently in a shady area.
- Ask your physician whether you are at particular risk because of medication.
- Remember to leave fresh water in the bowl for pets kept outdoors and provide as much shade as possible. Change the water frequently to prevent mosquitoes from breeding.
- If you feel any symptoms of heat illness such as dizziness, nausea, muscle cramps or headache, immediately stop all activity and move to a cooler area to rest and drink fluids. Medical attention should be sought if symptoms do not improve.

The San Antonio Metropolitan Health District encourages the community to contact the National Weather Service for the most current weather conditions at 830-606-3617 or visit [www.weather.gov/sanantonio](http://www.weather.gov/sanantonio) for

current hourly weather. **During the warmer months of the year, the Heat Outlook (Readiness Level III) will not be deactivated.**

**For Further Assistance:**

If you have an emergency, call:	911
For utility assistance, call CPS:	210-353-2222
For fan assistance, call the United Way Help Line:	211
For non-emergency information, call:	311 (Hours 7 a.m. – 11 p.m.)

## APPENDIX C

**For Immediate Release  
Contact Heat Representative: 207-2145**

### *News Release*

#### **City of San Antonio Advises of Excessive Heat Warning – Readiness Level I**

San Antonio Metropolitan Health District is notifying the community of an Excessive Heat Warning. When the daytime heat index is  $\geq 113^{\circ}\text{F}$  or air temperature is  $\geq 105^{\circ}\text{F}$ , the City of San Antonio advises the community to take the necessary precautions to stay safe and cool.

Due to the current dangerous weather conditions, the City of San Antonio, Office of Emergency Management, has coordinated the following services:

- Designated public buildings and specific private buildings with air conditioning as public cooling facilities for individuals who need relief from the heat:
- Overnight Locations:
  - Haven for Hope: (210)-220-2100 Mon-Fri, 8:00 a.m. – 5:00 p.m.
  - (210)-220-2500 After hours
- Daytime Locations:
  1. Public Libraries
  2. Senior Citizen Nutrition Sites
  3. Learning and Leadership Development Centers
  4. Other Public Facilities: gyms, swimming pools
  5. Private Facilities: (need to be listed)

Moreover, during this period, the City of San Antonio will continue to evaluate local environmental conditions and reach out to known-high risk individuals, such as the homeless, and offer assistance as needed for their safety.

In addition, residents and visitors are advised to use the following health precautions to avoid dehydration, heat-related illnesses or more severe consequences, especially among vulnerable populations, such as the elderly and young children.

- Drink non-alcoholic and caffeine-free liquids, such as water and juices.
- Be aware of those at high risk, such as the elderly, infants and children up to 4 years of age or individuals who are overweight. Check on elderly parents, relatives, acquaintances and neighbors as often as possible.
- Do not leave infants, children, the elderly or pets unattended in a parked car (even if the windows are down or the air conditioning is on) or any other hot environment.
- Plan to exercise and do other strenuous activities early or late in the day when it is cooler or utilize air-conditioned facilities.
- Use an umbrella, hat or sunscreen to protect your skin from the sun, and wear loose-fitting and light clothing to help heat escape away from your body. Rest frequently in a shady area.

- Ask your physician whether you are at particular risk because of medication.
- Remember to leave fresh water in the bowl for pets kept outdoors and provide as much shade as possible. Change the water frequently to prevent mosquitoes from breeding.
- If you feel any symptoms of heat illness such as dizziness, nausea, muscle cramps or headache, immediately stop all activity and move to a cooler area to rest and drink fluids. Medical attention should be sought if symptoms do not improve.

The San Antonio Metropolitan Health District encourages the community to contact the National Weather Service for the most current weather conditions at 830-606-3617 or visit [www.weather.gov/sanantonio](http://www.weather.gov/sanantonio) for current hourly weather. During the hot summer days, the **Heat Outlook (Readiness Level III) will not be deactivated.**

**For Further Assistance:**

If you have an emergency, call:	911
For utility assistance, call CPS:	210-353-2222
For fan assistance, call the United Way Help Line:	211
For non-emergency information, call:	311 (Hours 7 a.m. – 11 p.m.)

## APPENDIX D



# Emergency Preparedness and Response

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## Tips for Preventing Heat-Related Illness

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The best defense is prevention. Here are some prevention tips:

- Drink more fluids (nonalcoholic), regardless of your activity level. Don't wait until you're thirsty to drink. Warning: If your doctor generally limits the amount of fluid you drink or has you on water pills, ask him how much you should drink while the weather is hot.
- Don't drink liquids that contain alcohol or large amounts of sugar—these actually cause you to lose more body fluid. Also, avoid very cold drinks, because they can cause stomach cramps.
- Stay indoors and, if at all possible, stay in an air-conditioned place. If your home does not have air conditioning, go to the shopping mall or public library—even a few hours spent in air conditioning can help your body stay cooler when you go back into the heat. Call your local health department to see if there are any heat-relief shelters in your area.
- Electric fans may provide comfort, but when the temperature is in the high 90s, fans will not prevent heat-related illness. Taking a cool shower or bath, or moving to an air-conditioned place is a much better way to cool off.
- Wear lightweight, light-colored, loose-fitting clothing.
- NEVER leave anyone or any pets in a closed, parked vehicle.
- Although any one at any time can suffer from heat-related illness, some people are at greater risk than others. Check regularly on:
  - Infants and young children
  - People aged 65 or older
  - People who have a mental illness
  - Those who are physically ill, especially with heart disease or high blood pressure
- Visit adults at risk at least twice a day and closely watch them for signs of heat exhaustion or heat stroke. Infants and young children, of course, need much more frequent watching.



## If you must be out in the heat:

- Limit your outdoor activity to morning and evening
- Cut down on exercise. If you must exercise, drink two four glasses of cool, nonalcoholic fluids each hour. A beverage can replace the salt and minerals you lose in sweat. Warning: If you are on a low-salt diet, talk with doctor before drinking a sports beverage. Remember the warning in the first “tip” (above), too.
- Try to rest often in shady areas.
- Protect yourself from the sun by wearing a wide-brimmed hat (also keeps you cooler) and sunglasses and by putting on sunscreen of SPF 15 or higher (the most effective products say “broad spectrum” or “UVA/UVB protection” on their labels).



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## APPENDIX E

**Heat Stress and Athletic Participation Information, University Interscholastic League (UIL), Taken from the Athletic Manuals for Coaches and Administrators, 2014-2015.**

**This information is located in the following UIL athletic manuals: Baseball, Basketball, Softball, Tennis, Cross Country, Football, Soccer, Volleyball, Wrestling Manual & Spring Meet Manual (Golf, Tennis, Track and Field). These manuals can be found at:**

**<http://www.uil texas.org/athletics/manuals> .**

**HEAT STRESS AND ATHLETIC PARTICIPATION.** Heat illness is the leading cause of preventable death in high school athletes. These heat stroke deaths mainly occur in the summer months, at the beginning of conditioning for fall sports. Heat production during intense exercise is 15 to 20 times greater than at rest and can raise body core temperature one to two degrees Fahrenheit every five minutes unless heat is dissipated. Early fall football, cross country, soccer and field hockey practices are conducted in very hot and humid weather in many parts of the United States. Due to the equipment and uniform needed in football, most of the heat problems have been associated with football. There are no excuses for heatstroke if the proper precautions are taken. During hot weather conditions, the athlete is subject to the following:

**Exercise-associated Muscle Cramps (Heat Cramps)** - Painful cramps involving abdominal muscles and extremities caused by intense, prolonged exercise in the heat and depletion of salt and water due to sweating.

**Heat Syncope** - Weakness, fatigue and fainting due to loss of salt and water in sweat and exercise in the heat predisposes to heatstroke.

**Heat Exhaustion (Water Depletion)** - Excessive weight loss, reduced sweating, elevated skin and core body temperature, excessive thirst, weakness, headache and sometimes unconsciousness.

**Heat Exhaustion (Salt Depletion)** - Exhaustion, nausea, vomiting, muscle cramps, and dizziness due to profuse sweating and inadequate replacement of body salts.

**Heatstroke** - An acute medical emergency related to thermoregulatory failure. Associated with nausea, seizures, disorientation, and possible unconsciousness or coma. It may occur suddenly without being preceded by any other clinical signs. The individual is usually unconscious with a high body temperature and a hot dry skin (heatstroke victims, contrary to popular belief, may sweat profusely).

It is believed that the above mentioned heat stress problems can be controlled provided certain precautions are taken. According to the American Academy of Pediatrics Committee on Sports Medicine, heat related illnesses are all preventable. (Sports Medicine: Health Care for Young Athletes, American Academy of Pediatrics, 1991).

The following practices and precautions are recommended:

1. Each athlete must have a physical exam with a medical history when first entering a program and an annual health history update. History of previous heat illness and type of training activities before organized practice begins should be included. State high school association's recommendations should be followed.
2. It is clear that top physical performance can only be achieved by an athlete who is in top physical condition. Lack of physical fitness impairs the performance of an athlete who participates in high

temperatures. Coaches should know the **physical condition** of their athletes and set practice schedules accordingly.

3. Along with physical conditioning, the factor of acclimatization to heat is important. Acclimatization is the process of becoming adjusted to heat and it is essential to provide for **gradual acclimatization to hot weather**. It is necessary for an athlete to exercise in the heat if he/she is to become acclimatized to it. It is suggested that a graduated physical conditioning program be used and that 80 percent acclimatization can be expected to occur after the first seven to ten days. Final stages of acclimatization to heat are marked by increased sweating and reduced salt concentration in the sweat.

4. The old idea that water should be withheld from athletes during workouts has no scientific foundation. The most important safeguard to the health of the athlete is the replacement of water. Water must be on the field and readily available to the athletes at all times. It is recommended that a minimum of ten minutes be scheduled for a water break every half hour of heavy exercise in the heat. **Water should be available in unlimited quantities**. Check and be sure athletes are drinking the water. Cold water is preferable. Drinking ample water before practice or games has also been found to aid performance in the heat.

5. Salt should be replaced daily. Modest salting of foods after practice or games will accomplish this purpose. Salt tablets are not recommended. **Attention must be directed to replacing water -- fluid replacement is essential**.

6. Know both the **temperature and humidity**. The greater the humidity, the more difficult it is for the body to cool itself. Test the air prior to practice or game using a wet bulb, globe, temperature index (WBGT Index) which is based on the combined effects of air temperature, relative humidity, radiant heat and air movement. The following precautions are recommended when using the WBGT Index (ACSM's Guidelines for the Team Physician, 1991):

< 65°F.....Low Risk  
65 - 73°F.....Moderate risk  
73°F - 82°F.....High risk  
≥82°F..... Very high risk  
≥90°F.....Cancel Activity

There is also a weather guide for activities that last 30 minutes or more (Fox and Mathews, 1981) which involves knowing the relative humidity and air temperature:

Air Temp	Danger Zone	Critical Zone
70°F.....	80 percent RH.....	100 percent RH
75°F.....	70 percent RH.....	100 percent RH
80°F.....	50 percent RH.....	80 percent RH
85°F.....	40 percent RH.....	68 percent RH
90°F.....	30 percent RH.....	55 percent RH
95°F.....	20 percent RH.....	40 percent RH
100°F.....	10 percent RH.....	30 percent RH

RH = Relative Humidity

One other method of measuring the relative humidity is the use of a sling psychrometer, which measures wet bulb temperature. The wet bulb temperature should be measured prior to practice and the intensity and duration of practice adjusted accordingly. Recommendations are as follows:

< 60°F..... Safe but always observe athletes  
61°F - 65°F .....Observe players carefully  
66°F - 70°F.....Caution.  
71°F - 75°F.....Shorter practice sessions & more frequent water & rest breaks  
75°F Plus .....Danger level and extreme caution

7. Cooling by evaporation is proportional to the area of skin exposed. In extremely hot and humid weather reduce the amount of clothing covering the body as much as possible. **Never use rubberized clothing.**

8. Athletes should **weigh** each day before and after practice and **weight charts checked**. Generally a three percent weight loss through sweating is considered safe and over a three percent weight loss is in the danger zone. Over a three percent weight loss the athlete should not be allowed to practice in hot and humid conditions. Observe the athletes closely under all conditions. Do not allow athletes to practice until they have adequately replaced their weight.

9. Observe athletes carefully for signs of trouble, particularly athletes who lose significant weight, and the eager athlete who constantly competes at his/her capacity. Some trouble signs are nausea, incoherence, fatigue, weakness, vomiting, cramps, weak rapid pulse, visual disturbance, and unsteadiness.

10. Teams that encounter hot weather during the season through travel or following an unseasonable cool period should be physically fit but will not be environmentally fit. Coaches in this situation should follow the above recommendations and substitute more frequently during games.

11. Know what to do in case of emergency and have your emergency plans written with copies to all your staff. Be familiar with immediate first aid practices and prearranged procedures for obtaining medical care, including ambulance service.

1. **Heat Stroke - This is a medical emergency. DELAY COULD BE FATAL.**

Immediately cool body while waiting for transfer to a hospital. Remove clothing and place ice bags on the neck, in the axilla (armpit), and on the groin area. An increasing number of medical personnel are now using a treatment for heat illness that involves applying either alcohol or cool water to the victim's skin and vigorously fanning the body. The fanning causes evaporation and cooling. (Source--The First Aider--September 1987)

2. **Heat Exhaustion - OBTAIN MEDICAL CARE AT ONCE.**

Cool body as you would for heat stroke while waiting for transfer to hospital. Give fluids if athlete is able to swallow and is conscious.

12. **Summary** - The main problem associated with exercising in the hot weather is water loss through sweating. Water loss is best replaced by allowing the athlete unrestricted access to water. Water breaks two or three times per hour are better than one break an hour. Probably the best method is to have water available at all times and to allow the athlete to drink water whenever he/she needs it. Never restrict the amount of water an athlete drinks, and be sure the athletes are drinking the water. The small amount of salt lost in sweat is adequately replaced by salting food at meals. Talk to your medical personnel concerning emergency treatment plans.

## **WHAT TO DRINK DURING EXERCISE AND OTHER PHYSICAL ACTIVITY:**

- For most exercising athletes, water is appropriate and sufficient for pre-hydration and rehydration. Water is quickly absorbed, well-tolerated, an excellent thirst quencher and cost-effective.
- Traditional sports drinks with an appropriate carbohydrate and sodium formulation may provide additional benefit in the following general situations:
  - Prolonged continuous or intermittent activity of greater than 45 minutes
  - Intense, continuous or repeated exertion
  - Warm-to-hot and humid conditions
- Traditional sports drinks with an appropriate carbohydrate and sodium formulation may provide additional benefit for the following individual conditions:
  - Poor hydration prior to participation
  - A high sweat rate or “salty sweater”
  - Poor caloric intake prior to participation
  - Poor acclimatization to heat and humidity
- A 6 to 8% carbohydrate formulation is the maximum that should be utilized in a sports drink. Any greater concentration will slow stomach emptying and potentially cause the athlete to feel bloated. An appropriate sodium concentration (0.4–1.2 grams per liter) will help with fluid retention and distribution and decrease the risk of exertional muscle cramping.

## **WHAT NOT TO DRINK DURING EXERCISE:**

- Fruit juices with greater than 8 percent carbohydrate content and carbonated soda can both result in a bloated feeling and abdominal cramping.
- Athletes should be aware that nutritional supplements are not limited to pills and powders as many of the new “energy” drinks contain stimulants such as caffeine and/or ephedrine.
  - These stimulants may increase the risk of heat illness and/or heart problems with exercise. They can also cause anxiety, jitteriness, nausea, and upset stomach or diarrhea.
  - Many of these drinks are being produced by traditional water, soft drink and sports drink companies which can cause confusion in the sports community. As is true with other forms of supplements, these “power drinks”, “energy drinks”, or “fluid supplements” are not regulated by the FDA. Thus, the purity and accuracy of contents on the label is not guaranteed.
  - Many of these beverages which claim to increase power, energy, and endurance, among other claims, may have additional ingredients that are not listed. Such ingredients may be harmful and may be banned by governing bodies like the NCAA, USOC, or individual state athletic associations.
  - See the **NFHS Position Statement and Recommendations for the use of Energy Drinks by Young Athletes** for further information.

## **HYDRATION TIPS AND FLUID GUIDELINES:**

- Many athletes do not voluntarily drink enough water to prevent significant dehydration during physical activity.

- Drink regularly throughout all physical activities. An athlete cannot always rely on his or her sense of thirst to sufficiently maintain proper hydration.
- Drink before, during, and after practices and games. For example:
  - Drink 16 ounces of fluid 2 hours before physical activity.
  - Drink another 8 to 16 ounces 15 minutes before physical activity.
  - During physical activity, drink 4 to 8 ounces of fluid every 15 to 20 minutes (some athletes who sweat considerably can safely tolerate up to 48 ounces per hour).
  - After physical activity, drink 16 to 20 ounces of fluid for every pound lost during physical activity to achieve normal hydration status before the next practice or competition.
- The volume and color of your urine is an excellent way of determining if you're well hydrated. Small amounts of dark urine means that you need to drink more, while a "regular" amount of light-colored or nearly clear urine generally means you are well-hydrated. A Urine Color Chart can be accessed at: <http://at.uwa.edu/admin/UM/urinecolorchart.doc>
- Hyponatremia is a rare, but potentially deadly disorder resulting from the over consumption of water. It is most commonly seen during endurance events, such as marathons, when participants consume large amounts of water over several hours, far exceeding fluid lost through sweating. The opposite of dehydration, hyponatremia is a condition where the sodium content of the blood is diluted to dangerous levels. Affected individuals may exhibit disorientation, altered mental status, headache, lethargy, and seizures. The diagnosis can only be made by testing blood sodium levels. Suspected hyponatremia is a medical emergency and EMS (Emergency Medical Services) must be activated. It is treated by administering intravenous fluids containing high levels of sodium.

**Link to UIL Athletic Manuals for Coaches and Administrators:**

<http://www.uil texas.org/>

<http://www.uil texas.org/health> Health and Safety

<http://www.uil texas.org/athletics/manuals> Sports Manuals

[http://www.uil texas.org/files/health/NFHS\\_Hydration.pdf](http://www.uil texas.org/files/health/NFHS_Hydration.pdf) National Federation of State High School Associations Position Statement and Recommendations for Hydration to Minimize the Risk for Dehydration and Heat Illness

**UNIVERSITY INTERSCHOLASTIC LEAGUE**

**1701 Manor Road, Austin, TX 78722**

**Telephone (512) 471-5883**

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## **APPENDIX F**

### **Heat Injury Precautions Taken for Special Events**

The occurrence of heat-induced illnesses is the highest in Bexar County, Texas from late April through September when the daily high temperature generally ranges between 90°F to 100°F. During this time of year, the area can experience hot, high humid conditions on one day, followed by a brisk northern wind the following day and then have temperatures climb into the nineties on the next day. Temperatures change very rapidly.

In combination with humidity, these temperatures can result in a heat index value that can produce heat injury, especially to individuals engaging in outdoor activities, i.e. running, jumping, marching, and other vigorous activities. Persons who are not acclimatized to working in hot environments and who are exposed to combinations of environmental and metabolic heat above an identified tolerance level substantially increase their risk of incurring acute adverse health affects. The classes of heat injury include heat cramps, heat exhaustion, and heat stroke. All injuries will require medical follow-up treatment.

The following is a list of precautions and prevention measures that can be taken by schools, private organizations and participants when planning and attending special events.

1. Strenuous outdoor physical activities should not be conducted when the heat index reads 105°F or above. Please contact the National Weather Service for current weather conditions at 830-606-3617 or [www.weather.gov/sanantonio](http://www.weather.gov/sanantonio)
2. All summer events, ideally, should be scheduled for early morning or late evening.
3. Activity sponsors should provide fluids (water) throughout the duration of the event.
4. Participants should be encourage to drink eight ounces of fluid ten to 15 minutes before the activity and fluid ingestion at frequent intervals should be permitted during the activity.
5. Participants should be instructed on the recognition of early signs and symptoms of developing heat illness.
6. Provisions should be made for the care of heat-induced illnesses.
7. Wear clothing that is lightweight, loose fitting and light-colored, hats and sunscreen.
8. If possible, mist stations should be provided to cool down the participants.

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## **APPENDIX G**

**City of San Antonio Animal Care Services  
4710 State Highway 151, San Antonio, TX 78227  
(210) 207-4PET**

**Humane Society of San Antonio  
4804 Fredericksburg / San Antonio, TX 78229  
(210) 226-7461 / Fax (210) 225-7297**

### **Protect Your Pet from Hot Weather**

**To protect your pet from summertime hazards, please follow these tips:**

- ✓ Never leave your pet in a parked car. Even cracked windows won't protect your pet from overheating or suffering from heat stroke during hot summer days.
- ✓ Exercise your dog in the early morning or evening hours, instead of during the middle of the day when it's the hottest.
- ✓ If your dog or cat is out during the day, remember that asphalt and concrete can get very hot and burn the pads of your pet's feet. Your pet must always have shelter available to protect it from extreme temperatures and inclement weather. Keep in mind, too, that pets that are older or overweight are more likely to overheat during hot weather.
- ✓ Since many people treat their lawns with pesticides at this time of year, keep your pet away from unfamiliar yards and grassy areas.
- ✓ Provide your pet with fresh, cool water every day in a tip-proof bowl.
- ✓ Keep your pet well-groomed, but resist the temptation to shave off all of his hair in an effort to keep him cool. A pet's coat will protect him from getting sunburned. The coat also acts as cooling insulation for most animals.
- ✓ Keep your pet away from spots or puddles of auto coolant in the garage, driveway, or parking lots. The sweet taste of this poisonous liquid is tempting to animals, but could lead to a fatal result.
- ✓ Don't let your dog ride in the back of an open vehicle, like a pick-up truck. Unless your dog is riding in the cab with you, your dog could be bounced or jump out of the moving vehicle. If your pet must travel in the back of an open vehicle, make sure he's safely tethered to the center of the bed where he's unable to reach the sides and is able to stand or sit on a slip-proof and cool surface.

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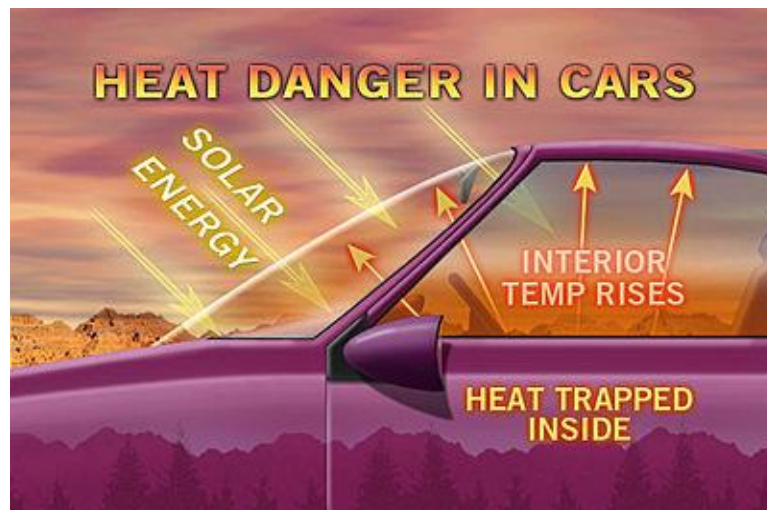
## APPENDIX H

### Hot Cars Perilous for Children and Pets in Summer

As temperatures across the nation soar this summer, so do the deaths of children and pets left inside vehicles.

Since 1998, an average 37 children have died each year in the United States of vehicular heat stroke. From 1990 to July 2016, 823 children have died because they were left in hot vehicles, according to Consumer Reports. Whether you're running a quick errand or taking a road trip, it's important to understand just how quickly the temperature inside an enclosed car can rise.

Short-wave energy from the sun enters vehicles through the relatively transparent nature of their windows. The internal objects in the automobile heat the air inside and give off long-wave energy, which is not able to escape from the vehicle.



Children and animals are less able to handle this extreme heat than adults and are more susceptible to hyperthermia.

Hyperthermia, a medical emergency when the body produces or absorbs more heat that it can dissipate, can lead to brain damage, kidney failure and death.

More than half of all child hyperthermia fatalities in the United States from 1998 to 2016 were children under two years old.

According to a study by San Francisco State University (SFSU), temperatures in a closed automobile rose approximately 19 degrees in just 10 minutes, 29 degrees after 20 minutes, 34 degrees in 30 minutes and 43 degrees in an hour. The temperature could increase 50 degrees after a second hour.

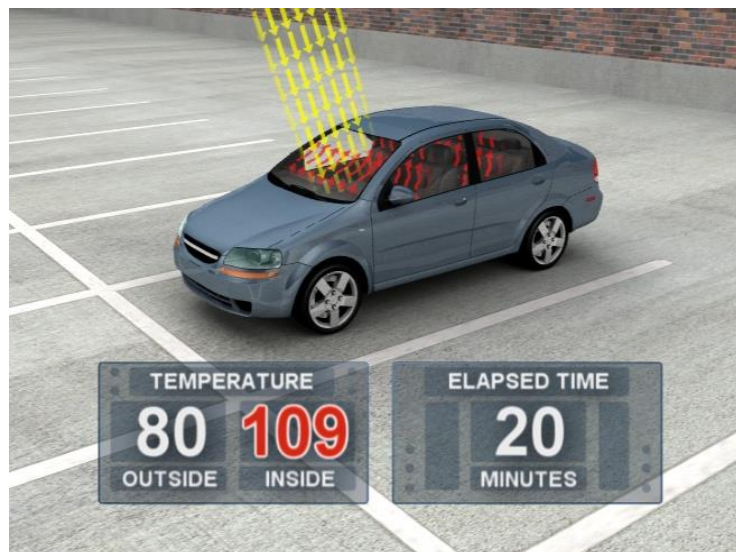
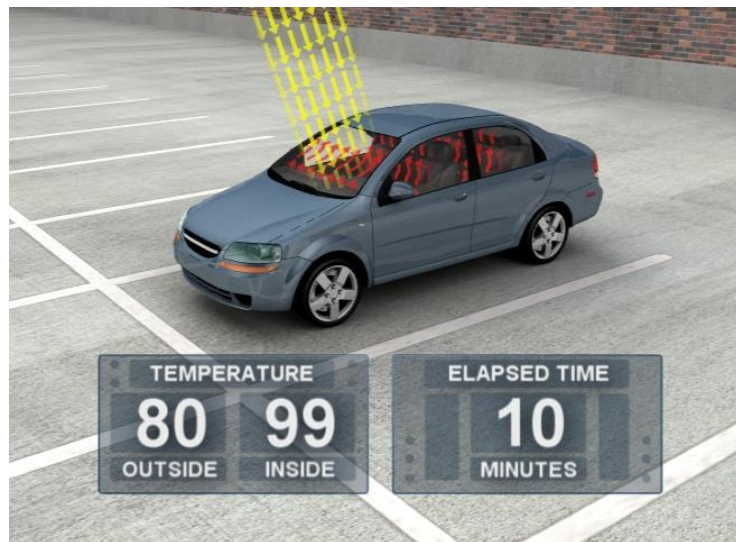
The Animal Protection Institute (API) conducted their own study that showed that deadly temperatures can quickly build inside a closed vehicle, even with moderately warm temperatures outside.

The study found that even at 9 a.m. with an outside temperature of 82 degrees, the closed automobile registered 109 degrees inside. When the outside temperature rose to 112 degrees at 1:30 p.m., the closed vehicle reached 124 degrees.

The API's study also measured vehicles with cracked windows. With four windows cracked, an 88-degree day outside turned into a 103-degree sauna inside the vehicle at 10 a.m. When the temperature rose to 110 degrees at 2 p.m. that day, the internal temperature rose to 123 degrees.

Although there was a drop in the internal temperature of an automobile with cracked windows, the data from these studies shows leaving a child or pet inside remains a perilous choice.

Never leave a child unattended in a vehicle. If you see a child in a hot vehicle, call 9-1-1.



## APPENDIX I

### LINKS TO OTHER HEAT RELATED SOURCES

Texas Department of State Health Services – Heat Precautions

[http://www.dshs.state.tx.us/preparedness/factsheet\\_heat.shtm](http://www.dshs.state.tx.us/preparedness/factsheet_heat.shtm)

San Antonio Office of Emergency Management – Beat The Heat Program

<https://www.saoemprepare.com/BeInformed/NaturalDisasters/Heat/BeatTheHeat#243493068-staying-cool>

Texas Guide to School Health Program

<http://www.dshs.state.tx.us/schoolhealth/shpguide/chap9.pdf> (see pp. 509-513)

University Interscholastic League

<http://www.uil texas.org/>

<http://www.uil texas.org/health/info/heat-stress-and-athletic-participation>

City of San Antonio Animal Care Services

<http://www.sanantonio.gov/AnimalCare/>

Humane Society of San Antonio

[www.sahumane.org](http://www.sahumane.org)

March of Dimes

[www.marchofdimes.com](http://www.marchofdimes.com)

NOAA's National Weather Service, Office of Climate, Water, and Weather Service

[www.weather.gov/sanantonio](http://www.weather.gov/sanantonio)

National Institute for Occupational Safety and Health (NIOSH)

Safety and Health Topic: Heat Stress

<http://www.cdc.gov/niosh/topics/heatstress/>

### References

United States Environmental Protection Agency, Office of Atmospheric Programs

Excessive Heat Events Guidebook, EPA 430-B-06-005, March 2016

[http://www.epa.gov/hiri/about/pdf/EHEguide\\_final.pdf](http://www.epa.gov/hiri/about/pdf/EHEguide_final.pdf)

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## APPENDIX J

### Project Cool & Use of Portable Electric Fans during Excessive Heat Events



Summer months - June through August - inflict considerably high temperatures and humidity in San Antonio. Seniors living in homes without air conditioning or circulating air face a greater risk of heat-related injuries and fatalities during the summer.

Since 1997, the City of San Antonio (Human Services, Fire Department) Catholic Charities of San Antonio, Inc., United Way of San Antonio & Bexar County, the Society of St. Vincent de Paul and community/corporate partners have coordinated Project Cool to provide heat relief to senior residents 60 years of age and older across the city through donation and free distribution of 20-inch box fans to seniors in need.

#### HOW TO DONATE A FAN FOR PROJECT COOL

1. Purchase a new 20-inch electric box fan at any area retail store—box fans cost between \$20 and \$30.
2. Drop your new box fan off at any San Antonio Fire Station (except for the Airport Fire Station) at any time between June and September.
3. You can also donate monetary contributions toward the purchase of box fans for senior residents. To donate mail a check in any amount payable to “Project Cool c/o Catholic Charities” to: Catholic Charities of San Antonio, 202 W. French Place, San Antonio, TX 78212.

#### HOW TO REQUEST A FAN

1. Seniors who are 60 years of age and older, current San Antonio residents and show critical need for a box fan are eligible to receive a fan free of charge.
2. Call 2-1-1 (United Way Helpline) to request a box fan (fan supplies are limited by donations received during the summer).
3. City of San Antonio, Department of Human Services will aid seniors in obtaining a fan who attends a City of San Antonio Senior Center.

## **Use of Portable Electric Fans during Excessive Heat Events**

The widespread availability and ease of using portable electric fans draw many people to use them for personal cooling during an EHE. Portable electric fans can, however, increase the circulation of hot air, which can increase thermal stress and health risks during EHE conditions.

As a result, portable electric fans need to be used with caution under specific circumstances during an EHE. Here is a list of Do's and Don'ts for their use:

### **DO**

- **Use a portable electric fan in or next to an open window so heat can exhaust to the outside (box fans are best).**
- **Use a portable electric fan to bring in cooler air from the outside.**
- **Plug your portable electric fan directly into a wall outlet. If you need an extension cord, check that it is a UL (Underwriter Laboratories) approved in the United States or CSA (Canadian Standards Approved) in Canada.**

### **DON'T**

- **Use a portable electric fan in a closed room without windows or doors open to the outside.**
- **Believe that portable electric fans cool air. They don't. They just move the air around and keep you cool by helping to evaporate your sweat.**
- **Use a portable electric fan to blow extremely hot air on yourself. This can accelerate the risk of heat exhaustion.**
- **Use a fan as a substitute for spending time in an air-conditioned facility during an EHE.**

**If you are afraid to open your window to use a portable electric fan, choose other ways to keep cool (e.g., cool showers, spend time in an air-conditioned location).**

Sources: Philadelphia Office of Mental Health & Mental Retardation, 2002 Toronto Public Health, 2002.

## APPENDIX K

### Heat Index Chart

The heat index (see chart below) is the "feels like", or apparent, temperature. As relative humidity increases, the air seems warmer than it actually is because the body is less able to cool itself via evaporation of perspiration.

As the heat index rises, so do health risks. When the heat index is 90°-105°F, heat exhaustion is possible. When it is above 105°F, it is probable. Heatstroke is possible when the heat index is above 105°F, and very likely when it is 130°F and above. Physical activity and prolonged exposure to the heat increase the risks.

NOTE: The heat index chart is designed with street clothes in mind. People wearing PPE will notice an increase in temperature inside the suits as the PPE level increases. Chemical resistant suits do not "breathe" and therefore trap heat inside. Temperature inside a chemical suit or encapsulated suit, in the sun will equal globe temperatures and may exceed 140 degrees F. These suits, like a car, can heat up very quickly.

#### NOAA's National Weather Service Heat Index

		Temperature (°F)															
		80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
Relative Humidity (%)	40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
	45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
	50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
	55	81	84	86	89	93	97	101	106	112	117	124	130	137			
	60	82	84	88	91	95	100	105	110	116	123	129	137				
	65	82	85	89	93	98	103	108	114	121	128	136					
	70	83	86	90	95	100	105	112	119	126	134						
	75	84	88	92	97	103	109	116	124	132							
	80	84	89	94	100	106	113	121	129								
	85	85	90	96	102	110	117	126	135								
	90	86	91	98	105	113	122	131									
	95	86	93	100	108	117	127										
	100	87	95	103	112	121	132										

#### Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

  Caution
   Extreme Caution
   Danger
   Extreme Danger

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## APPENDIX L

### COMMUNITY RESOURCES

City Public Service (CPS) Customer Service Line	210-353-2222	Financial assistance with utility bills	Project REAP: all year round
Bexar County Department of Community Resources	210-335-6770 (210-335-3666 – after 2pm)	Utility Assistance Energy Crisis Program	Monday – Friday 8am – 5pm Limited daily Appointments Affordability Program Income & Family Size
San Antonio Water System (SAWS)	210-704-7297 <a href="http://SAWS.org">SAWS.org</a>	Financial planning assistance with water bills	Monday – Friday 8am – 4:30pm
City of San Antonio Center for Working Families	210-207-7830 <a href="http://www.sanantonio.gov/humanservices">www.sanantonio.gov/humanservices</a>	Financial assistance	
Humane Society San Antonio	210-226-7461	Tips for your pets	Yearly
City of San Antonio Animal Care Services 4710 State Highway 151, San Antonio, TX 78227	210-207-4PET	Tips for your pets	Yearly
City of San Antonio 311 Line	3-1-1	Report Animal Cruelty	Yearly
City of San Antonio Dept of Human Services 106 S. St. Mary's, 7th Floor San Antonio, TX 78205	210-207-7172	Information on Senior Services	Yearly Monday – Friday 8am – 4:30pm
211 Texas/United Way Help Line	2-1-1	Request a portable fan, PROJECT COOL	June 1 <sup>st</sup> – Sept 30
Alamo Service Connection Bexar Area Agency on Aging	210-477-3275	Cool Neighbor Campaign-Door Hanger and Thermometer explaining Heat Related signs and symptoms Information and referrals for seniors over age 60 for utility assistance and home weatherization programs	Monday – Friday 8am – 5pm

## **Metro Health Heat Plan**

Summer heat in San Antonio can become more than a nuisance for many individuals. Excessive heat can pose a public health threat, causing serious adverse health effects, or even death.

To address these threats, the San Antonio Metropolitan Health District, in conjunction with the Office of Emergency Management of San Antonio and Bexar County and the National Weather Service, developed a heat plan to increase public awareness and lessen health risks during periods of excessive heat.

The heat plan includes the following levels to describe heat conditions, identify risks associated with elevated temperatures and explain possible outcomes:

	<b>Heat conditions</b>	<b>Health effects</b>	<b>Action steps</b>
<b>Level IV</b>	Normal weather conditions	Fatigue possible, after prolonged exposure.	Metro Health conducts heat plan awareness campaign to inform the public of risks and prevention tools in preparing for extreme heat conditions.
<b>Level III</b>	Metro Health will issue a "Heat Outlook" when temperatures reach 100°F or higher, or when the heat index is expected to reach between 90°F to 108°F range for two consecutive days.	Sunstroke, heat cramps or heat exhaustion possible with prolonged exposure.	Hospitals begin passive surveillance to report heat illnesses to Metro Health.
<b>Level II</b>	Metro Health will issue a "Heat Advisory" when the daytime heat index greater than 108°F or air temperature greater than 103°F.	Sunstroke, heat cramps or heat exhaustion likely and heat stroke possible with prolonged exposure.	Information regarding existing cooling locations will be made available.
<b>Level I</b>	When the heat index reaches 113°F or higher or air temperature higher than 105 °F Metro Health concludes that "Heat Advisory" standards have been exceeded, Metro Health will issue an "Excessive Heat Warning."	Heat, sunstroke highly likely with continued exposure.	Shelters and daytime cooling locations hours adjusted based on demand. Overnight location will open at: Haven for Hope Daytime locations: local malls, public libraries, senior centers nutrition sites, learning and leadership development centers, public gyms and swimming pools.

### **Community Resources for Excessive Heat Events**

Organization	Phone	Details
City Public Service (CPS) Customer Service Line	210-353-2222	Financial assistance with utility bills
Bexar County Dept. of Community Resources	210-335-6770	Utility Assistance Energy Crisis Program
San Antonio Water System (SAWS)	210-704-7297	Financial planning assistance with water bills
City of San Antonio Center for Working Families	210-207-7830	Financial assistance
Humane Society San Antonio	210-226-7461	Tips for your pets
City of San Antonio Animal Care Services 4710 State Highway 151, San Antonio, 78227	210-207-4PET	Tips for your pets
City of San Antonio 311 Line	3-1-1	Report Animal Cruelty
City of San Antonio Dept. of Human Services 106 S. St. Mary's, 7th Floor San Antonio, TX 78205	210-207-7172	Information on Senior Services
211 Texas/United Way Help Line	2-1-1	Request a portable fan, PROJECT COOL
Alamo Service Connection Bexar Area Agency on Aging	210-477-3275	Cool Neighbor Campaign-Door Hanger and Thermometer explaining Heat Related signs and symptoms. Information and referrals for seniors over age 60 for utility assistance and home weatherization programs

## Plan para el Calor de Metro Health

El calor veraniego en San Antonio puede causar más que incomodidad para algunos individuos. El calor excesivo puede causar una amenaza a la salud pública, con graves efectos adversos a la salud, o inclusive la muerte.

Reconociendo estas amenazas, el Distrito Metropolitano de Salud de San Antonio, en conjunto con la Oficina de Manejo de Emergencias de San Antonio, el Condado de Bexar County y el Servicio Nacional Climático, desarrollo un plan de acción para incrementar la concientización en el público acerca del calor excesivo y reducir los riesgos de salud durante periodos de calor excesivo.

El plan para el calor incluye los siguientes niveles para describir las condiciones climáticas con calor excesivo, identifica los riesgos asociados con temperaturas elevadas y explica posibles repercusiones:

Condiciones de Calor	Efectos a la Salud	Acciones a Tomar
Condiciones climáticas normales	Fatiga es posible, después de exposición prolongada.	Metro Health lleva a cabo campañas de concientización sobre el plan de calor para informar al público de los riesgos y técnicas de prevención para prepararse contra condiciones de calor extremo.
Metro Health declarara un "Pronostico de Calor" cuando las temperaturas alcancen 100°F o más, o cuando se espera que la sensación térmica alcance el rango de entre 90°F a 108°F por dos días consecutivos.	Insolación, calambres de calor o agotamiento por calor son posibles con exposición prolongada.	Los hospitales comienzan a monitorear pasivamente para reportar enfermedades de calor a Metro Health.
Metro Health declarara un "Aviso de Calor" cuando la sensación térmica durante el día es mayor a 108°F o la temperatura ambiental es mayor a 103°F.	Insolación, calambres de calor o agotamiento por calor son probables y golpes de calor son posibles con exposición prolongada.	Se proporcionara al público información acerca de lugares con refrigeración para refrescarse.
Cuando la sensación térmica alcance 113°F o más o cuando la temperatura ambiental suba a más de 105 °F Metro Health concluirá que se ha excedido los niveles de un "Alerta de Calor" y declarara un "Alerta de Calor Excesivo."	Calor, insolación altamente probable con exposición continua.	La disponibilidad y horarios de refugios y lugares públicos con refrigeración se ajustaran en base a la demanda. Refugios para pasar la noche incluye: Haven for Hope. Refugios diurnos: malls locales, bibliotecas públicas, sitios de nutrición para ancianos, centros de educación y desarrollo, gimnasios públicos y piscinas.

**Rec**

### **ursos Comunitarios durante Días de Calor Excesivo**

Organización	Teléfono	Detalles
City Public Service (CPS) Línea de servicio al consumidor	210-353-2222	Asistencia financiera con sus cuentas de electricidad.
Bexar County Depto. De Recursos Comunitarios	210-335-6770	Asistencia con sus cuentas de empresas de servicios públicos Programa de crisis de energía
San Antonio Water System (SAWS)	210-704-7297	Asistencia financiera con sus cuentas de agua
City of San Antonio Centro para Familias Trabajadoras	210-207-7830	Asistencia financiera
Humane Society San Antonio	210-226-7461	Consejos para sus mascotas
City of San Antonio Servicios de Cuidado de Animales 4710 State Highway 151, San Antonio, 78227	210-207-4PET	Consejos para sus mascotas
City of San Antonio Línea de ayuda 311	3-1-1	Reportar crueldad a los animales
City of San Antonio Depto. de Recursos Humanos 106 S. St. Mary's, 7mo piso San Antonio, 78205	210-207-7172	Información acerca de servicios para las personas de la tercera edad
211 Texas/Línea de ayuda de United Way	2-1-1	Pedir un ventilador portable, PROJECT COOL
Alamo Service Connection Agencia del Area de Bexar para la Vejez	210-477-3275	Campana de Cool Neighbor – Cartel para la puerta y termómetro explicando los índices y síntomas relacionados con insolación y golpes de calor. Información y recomendaciones para personas de la tercera edad de más de 60 años de edad para ayuda financiera con cuentas de servicio público y programas de adaptación climática de hogares.

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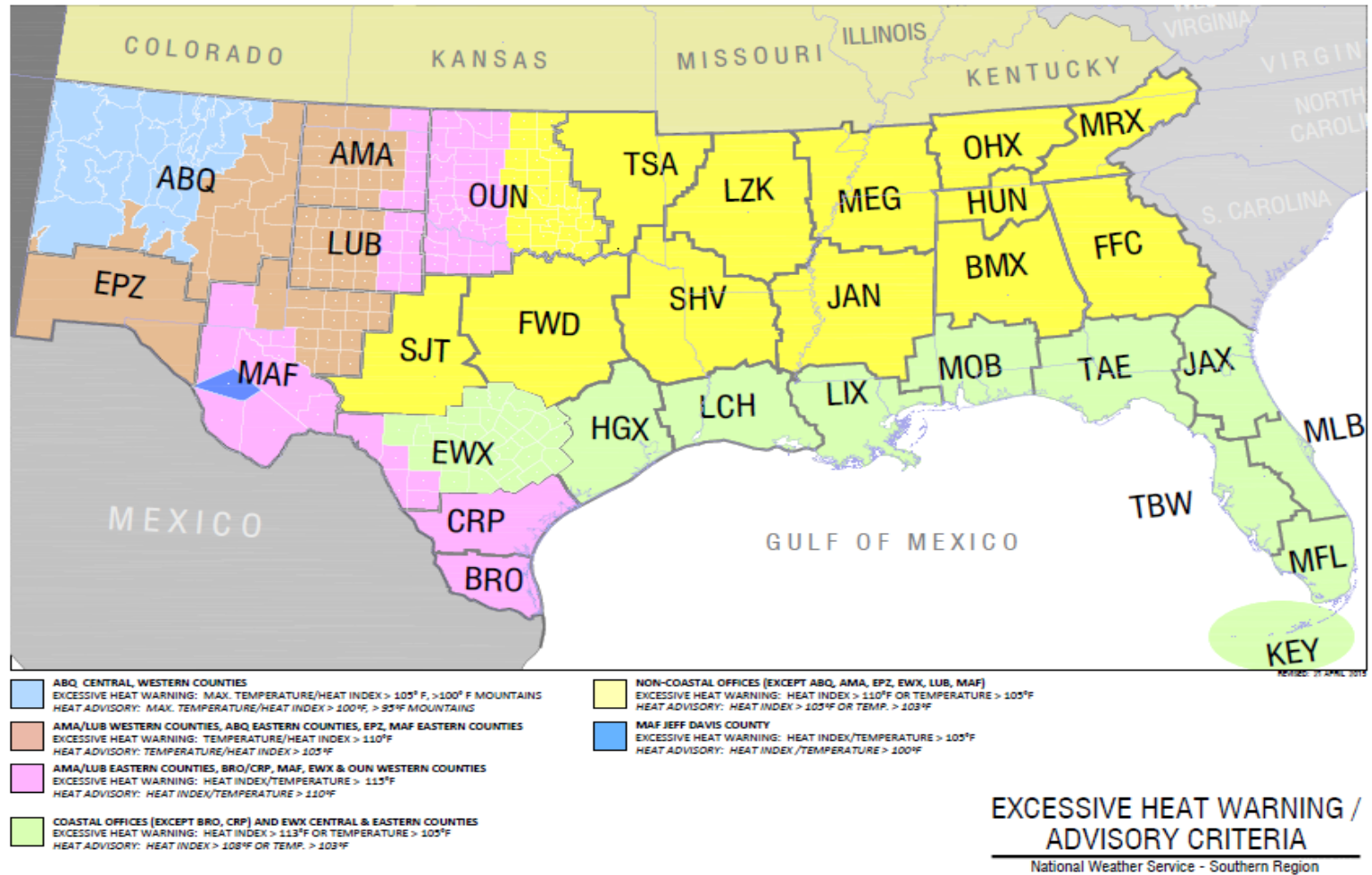
## Appendix M City of San Antonio Office of Emergency Management Extreme Heat Staffing Matrix

<b>Extreme Heat Event Staff Taskings Assignment Period 01/01/17 - 12/31/17</b>	<b>Determining Readiness Levels</b>	<b>Conducting Calls &amp; Webinars</b>	<b>TxDOT - Coordination</b>	<b>National Weather Service (NWS) Coordination</b>	<b>Fire Tracking</b>	<b>EMS Tracking</b>	<b>SAPD Tracking</b>	<b>Other Heat Related Surveillance Tracking</b>	<b>Media Releases</b>	<b>Non Profit Partner Coordination</b>	<b>Situational Awareness Report (SitRep)</b>	<b>Shelter Management</b>
<b>COSA Readiness Levels</b>	All	IV										
San Antonio Metropolitan Health District	1	1		1	1	1	1	1	1	1	1	1
COSA Office of Emergency Management	1	2		1	1	1	1	1	1	1	1	2
National Weather Service	2								1			
COSA Communications and Public Affairs Dept.									1			
COSA Health & Human Services Dept.												3
Bexar County Office of Emergency Management	2			2	2	2	2	2	1	2	2	3
COSA 311 Call Center								3				
COSA Fire Department								3				3
COSA Police Department								3				
Area Hospitals								3				
Bexar County Coroner's Office								3				
Bexar County Sheriff's Office								3				
City Public Service (CPS)								3				
San Antonio Water System (SAWS)								3				
COSA Library Dept.												3
COSA Parks and Recreation Dept.												3
American Red Cross										3		3
Haven for Hope										3		3
Salvation Army										3		3
United Way										3		3
Primary 1, Primary Alternate 2, Secondary Alternate 3												

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## APPENDIX N

### NATIONAL WEATHER SERVICE EXCESSIVE HEAT WARNING/ADVISORY CRITERIA



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## **APPENDIX O**

### **CDC Frequently Asked Questions (FAQ) About Extreme Heat**

#### **1. What happens to the body as a result of exposure to extreme heat?**

People suffer heat-related illness when the body's temperature control system is overloaded. The body normally cools itself by sweating. But under some conditions, sweating just isn't enough. In such cases, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs. Several factors affect the body's ability to cool itself during extremely hot weather. When the humidity is high, sweat will not evaporate as quickly, preventing the body from releasing heat quickly. Other conditions that can limit the ability to regulate temperature include old age, youth (age 0-4), obesity, fever, dehydration, heart disease, mental illness, poor circulation, sunburn, and prescription drug use and alcohol use.

#### **2. Who is at greatest risk for heat-related illness?**

Those at greatest risk for heat-related illness include infants and children up to four years of age, people 65 years of age and older, people who are overweight, and people who are ill or on certain medications.

#### **3. What is heat stroke?**

Heat stroke is the most serious heat-related illness. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

#### **4. What are the warning signs of a heat stroke?**

Warning signs of heat stroke vary but may include the following:

- An extremely high body temperature (above 103°F)
- Red, hot, and dry skin (no sweating)
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness

#### **5. What should I do if I see someone with any of the warning signs of heat stroke?**

If you see any of these signs, you may be dealing with a life-threatening emergency. Have someone call for immediate medical assistance while you begin cooling the victim. Do the following:

- Get the victim to a shady area.
- Cool the victim rapidly, using whatever methods you can. For example, immerse the victim in a tub of cool water; place the person in a cool shower; spray the victim with cool water from a garden hose; sponge the person with cool water; or if the humidity is low, wrap the victim in a cool, wet sheet and fan him or her vigorously.
- Monitor body temperature and continue cooling efforts until the body temperature drops to 101-102°F.

- If emergency medical personnel are delayed, call the hospital emergency room for further instructions.
- Do not give the victim alcohol to drink.
- Get medical assistance as soon as possible.

## **6. What is heat exhaustion?**

Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Those most prone to heat exhaustion are elderly people, those with high blood pressure, and those working or exercising in a hot environment.

## **7. What are the warning signs of heat exhaustion?**

The warning signs of heat exhaustion include the following:

- Heavy sweating
- Paleness
- Muscle cramps
- Tiredness
- Weakness
- Dizziness
- Headache
- Nausea or vomiting
- Fainting

The skin may be cool and moist. The pulse rate will be fast and weak, and breathing will be fast and shallow. If heat exhaustion is untreated, it may progress to heat stroke. See medical attention if symptoms worsen or last longer than one hour.

## **8. What steps can be taken to cool the body during heat exhaustion?**

- Drink cool, nonalcoholic beverages.
- Rest.
- Take a cool shower, bath, or sponge bath.
- Seek an air-conditioned environment.
- Wear lightweight clothing.

## **9. What are heat cramps and who is affected?**

Heat cramps are muscle pains or spasms – usually in the abdomen, arms, or legs that may occur in association with strenuous activity. People who sweat a lot during strenuous activity are prone to heat cramps. This sweating depletes the body's salt and moisture. The low salt level in the muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion. If you have heart problems or are on a low-sodium diet, seek medical attention for heat cramps.

## **10. What should I do if I have heat cramps?**

If medical attention is not necessary, take the following steps:

- Stop all activity and sit quietly in a cool place.
- Drink clear juice or a sports beverage.

- Do not return to strenuous activity for a few hours after the cramps subside because further exertion may lead to heat exhaustion or heat stroke.
- Seek medical attention for heat cramps if they do not subside in 1 hour.

### **11. What is heat rash?**

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. It can occur at any age but is most common in young children. Heat rash looks like a red cluster of pimples or small blisters. It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

### **12. What is the best treatment for heat rash?**

The best treatment for heat rash is to provide a cooler, less humid environment. Keep the affected area dry. Dusting powder may be used to increase comfort, but avoid using ointments or creams -- they keep the skin warm and moist and may make the condition worse.

### **13. Can medications increase the risk of heat-related illness?**

The risk for heat-related illness and death may increase among people using the following drugs:

- (1) psychotropics, which affect psychic function, behavior, or experience (e.g. haloperidol or chlorpromazine); (2) medications for Parkinson's disease, because they can inhibit perspiration; and (3) tranquilizers such as phenothiazines, butyrophenones, and thiozanthenes.

### **14. How effective are electric fans in preventing heat-related illness?**

Electric fans may provide comfort, but when the temperature is in the high 90s, fans will not prevent heat-related illness. Taking a cool shower or bath or moving to an air-conditioned place is a much better way to cool off. Air conditioning is the strongest protective factor against heat-related illness. Exposure to air conditioning for even a few hours a day will reduce the risk for heat-related illness. Consider visiting a shopping mall or public library for a few hours.

### **15. How can people protect their health when temperatures are extremely high?**

Remember to keep cool and use common sense. Drink plenty of fluid, replace salts and minerals, wear appropriate clothing and sunscreen, pace yourself, stay cool indoors, schedule outdoor activities carefully, use a buddy system, monitor those at risk, and adjust to the environment.

### **16. How much should I drink during hot weather?**

During hot weather you will need to drink more liquid than your thirst indicates. Increase your fluid intake, regardless of your activity level. During heavy exercise in a hot environment, drink two to four glasses (16-32 ounces) of cool fluids each hour. Avoid drinks containing alcohol because they will actually cause you to lose more fluid.

### **17. Should I take salt tablets during hot weather?**

Do not take salt tablets unless directed by your doctor. Heavy sweating removes salt and minerals from the body. These are necessary for your body and must be replaced. The easiest and safest way to do this is through your diet. Drink fruit juice or a sports beverage when you exercise or work in the heat.

### **18. What is the best clothing for hot weather or a heat wave?**

Wear as little clothing as possible when you are at home. Choose lightweight, light-colored, loose-fitting clothing. In the hot sun, a wide-brimmed hat will provide shade and keep the head cool. If you must go outdoors, be sure to apply sunscreen 30 minutes prior to going out and continue to reapply

according to the package directions. Sunburn affects your body's ability to cool itself and causes a loss of body fluids. It also causes pain and damages the skin.

**19. What should I do if I work in a hot environment?**

Pace yourself. If you are not accustomed to working or exercising in a hot environment, start slowly and pick up the pace gradually. If exertion in the heat makes your heart pound and leaves you gasping for breath, STOP all activity. Get into a cool area or at least in the shade, and rest, especially if you become lightheaded, confused, weak, or faint.

The above information is provided by the Centers for Disease Control and Prevention National Center for Environmental Health <http://www.bt.cdc.gov/disasters/extremeheat/faq.asp>

## APPENDIX P

### Cooling Stations List 2019

Site Name	Address	Phone	ZIP	Description	Site Hours
Claude Black Community Center (Council District 2)	2805 E Commerce St	210.207.5233	78207	Community Center	Mon. - Wed. 7:45 am - 6:00 pm; Thu. 7:45 am - 7:00 pm; Fri. 7:45 am - 5:00 pm; Sat. - Sun. Closed
Cuellar Community Center	5626 San Fernando St	210.207.3156	78237	Community Center	Regular Hours (until June 8, 2019 and beginning August 3, 2019): Mon. - Thu. 2:00 pm - 9:00 pm; Fri. 2:00 pm - 7:00 pm; Sat. 9:00 am - 5:00 pm; Sun. - Closed; Summer Hours (June 10, 2019 to August 2, 2019): Mon. -Thu. 5:30 pm - 9:00 pm; Sat. 10:00 am to 4:00 pm; Sun. - Closed
Dawson Community Center	2500 E Commerce St	210.227.1627	78203	Community Center	Regular Hours (until June 8, 2019 and beginning August 3, 2019): Mon. - Thu. 2:00 pm - 9:00 pm; Fri. 2:00 pm - 7:00 pm; Sat. 9:00 am - 5:00 pm; Sun. - Closed; Summer Hours (June 10, 2019 to August 2, 2019): Mon. -Thu. 5:30 pm - 9:00 pm; Sat. 10:00 am to 4:00 pm; Sun. - Closed
Garza Community Center	1450 Mira Vista	210.207.3239	78237	Community Center	Regular Hours (until June 15, 2019 and beginning August 9, 2019): Mon. - Thu. 2:00 pm - 9:00 pm; Fri. 2:00 pm - 7:00 pm; Sat. 9:00 am - 5:00 pm; Sun. - Closed; Summer Hours (June 17, 2019 to August 10, 2019): Mon. -Thu. 5:30 pm - 9:00 pm; Sat. 10:00 am to 4:00 pm; Sun. - Closed
Hamilton Community Center	10700 Nacogdoches Rd	210.207.3121	78217	Community Center	Regular Hours (until June 15, 2019 and beginning August 9, 2019): Mon. - Thu. 2:00 pm - 9:00 pm; Fri. 2:00 pm - 7:00 pm; Sat. 9:00 am - 5:00 pm; Sun. - Closed; Summer Hours (June 17, 2019 to August 10, 2019): Mon. -Thu. 5:30 pm - 9:00 pm; Sat. 10:00 am to 4:00 pm; Sun. - Closed
Palm Heights Community	1201 W Malone Ave	210.207.3099	78225	Community Center	Regular Hours (until June 8, 2019 and beginning August

Center					10, 2019): Mon. - Thu. 2:00 pm - 9:00 pm; Fri. 2:00 pm - 7:00 pm; Sat. 9:00 am - 5:00 pm; Sun. - Closed; Summer Hours (June 10, 2019 to August 3, 2019): Mon. - Thu. 5:30 pm - 9:00 pm; Sat. 10:00 am to 4:00 pm; Sun. - Closed
Ramirez Community Center	1011 Gillette Blvd	210.921.0681	78224	Community Center	Regular Hours (until June 8, 2019 and beginning August 3, 2019): Mon. - Thu. 2:00 pm - 9:00 pm; Fri. 2:00 pm - 7:00 pm; Sat. 9:00 am - 5:00 pm; Sun. - Closed; Summer Hours (June 10, 2019 to August 2, 2019): Mon. - Thu. 5:30 pm - 9:00 pm; Sat. 10:00 am to 4:00 pm; Sun. - Closed
Southside Lions Community Center	3100 Hiawatha St	210.207.3155	78210	Community Center	Regular Hours (until June 8, 2019 and beginning August 3, 2019): Mon. - Thu. 2:00 pm - 9:00 pm; Fri. 2:00 pm - 7:00 pm; Sat. 9:00 am - 5:00 pm; Sun. - Closed; Summer Hours (June 10, 2019 to August 2, 2019): Mon. - Thu. 5:30 pm - 9:00 pm; Sat. 10:00 am to 4:00 pm; Sun. - Closed
Tobin Community Center	1906 W Martin St	210.225.0941	78207	Community Center	Regular Hours (until June 8, 2019 and beginning August 3, 2019): Mon. - Thu. 3:00 pm - 9:00 pm; Fri. 3:00 pm - 7:00 pm; Sat. 1:00 pm - 5:00 pm; Sun. - Closed; Summer Hours (June 10, 2019 to August 2, 2019): Mon. - Thu. 5:30 pm - 9:00 pm; Sat. 9:00 am to 4:00 pm; Sun. - Closed
Bazan Library	2200 W Commerce St	210.207.9160	78207	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Brook Hollow Library	530 Heimer Rd	210.207.9030	78232	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Carver Library	3350 E Commerce St	210.207.9180	78220	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Central Library	600 Soledad St	210.207.2500	78205	Library	Mon. - Thu. 9:00 am - 9:00 pm; Fri. - Sat. 9:00 am - 5:00

					pm; Sun. 11:00 am - 5:00 pm
Cody Library	11441 Vance Jackson Rd	210.207.9100	78230	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Collins Garden Library	200 N Park Blvd	210.207.9120	78204	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Cortez Library	2803 Hunter Blvd	210.207.9130	78224	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Encino Library	2515 E Evans Rd	210.207.9250	78259	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Forest Hills Library	5245 Ingram Rd	210.207.9230	78228	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Great Northwest Library	9050 Wellwood St	210.207.9210	78250	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Guerra Library	7978 W Military Dr	210.207.9070	78227	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Igo Library	13330 Kyle Seale Pkwy	210.207.9080	78249	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Johnston Library	6307 Sun Valley Dr	210.207.9240	78227	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Landa Library	233 Bushnell Ave	210.207.9090	78212	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Las Palmas Library	515 Castroville Rd	210.207.9200	78237	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Maverick Library	8700 Mystic Park	210.207.9060	78254	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
McCreless Library	1023 Ada St	210.207.9170	78223	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am

					- 6:00 pm
Memorial Library	3222 Culebra Rd	210.207.9140	78228	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Mission Library	3134 Roosevelt Ave	210.207.2704	78214	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Pan American Library	1122 W Pyron Ave	210.207.9150	78221	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Parman Library	20735 Wilderness Oak	210.207.2703	78258	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
San Pedro Library	1315 San Pedro Ave	210.207.9050	78212	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Schaefer Library	6322 US Hwy 87 E	210.207.9300	78222	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Semmes Library	15060 Judson Rd	210.207.9110	78247	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Thousand Oaks Library	4618 Thousand Oaks Dr	210.207.9190	78233	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Tobin Library	4134 Harry Wurzbach Rd	210.207.9040	78209	Library	Mon. & Wed. 10:00 am - 6:00 pm; Tue. & Thu. 12:00 pm - 8:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Westfall Library	6111 Rosedale Ct	210.207.9220	78201	Library	Mon. & Wed. 12:00 pm - 8:00 pm; Tue. & Thu. 10:00 am - 6:00 pm; Fri. - Sun. 10:00 am - 6:00 pm
Alicia Trevino Lopez Senior Center (Council District 6)	8353 Culebra Rd	210.558.0178	78251	Senior Center	Mon. - Fri. 7:00 am - 4:00 pm; Sat. - Sun. Closed
Bob Ross Senior Center (Council District 8)	2219 Babcock Rd	210.207.5300	78229	Senior Center	Mon. - Fri. 7:00 am - 4:00 pm; Sat. - Sun. Closed
Commanders House Adult and Senior Center	622 S Flores St	210.207.3010	78204	Senior Center	Mon. -Fri. 7:45 am - 4:30 pm; Sat. - Sun. Closed

District 2 Senior Center (Council District 2)	1751 S WW White Rd	210.207.5390	78220	Senior Center	Mon. - Fri. 7:00 am - 4:00 pm; Sat. - Sun. Closed
District 5 Senior Center (Council District 5)	2701 S Presa St	210.207.5270	78210	Senior Center	Mon. - Fri. 7:00 am - 4:00 pm; Sat. - Sun. Closed
Granados Senior Center Adult and Senior	500 Freiling Dr	210.207.3285	78213	Senior Center	Mon. & Wed. 8:00 am - 7:00 pm; Tue. & Thu. 8:00 am - 8:00 pm; Fri. 8:00 am - 6:00 pm; Sat. - Sun. Closed
Lion's Field Adult & Senior Citizens Center	2809 Broadway St	210.207.5380	78209	Senior Center	Mon. - Wed. 7:30 am - 9:00 pm; Thu. 7:30 am - 10:00 pm; Fri. - 7:30 am - 7:00 pm; Sat. - Sun. Closed
Normoyle Senior Center (Council District 5)	700 Culberson Ave	210.207.5650	78211	Senior Center	Mon. - Fri. 7:00 am - 4:00 pm; Sat. - Sun. Closed
Northeast Senior Center (Council District 10)	4135 Thousand Oaks	210.207.4590	78217	Senior Center	Mon. - Fri. 7:00 am - 4:00 pm; Sat. - Sun. Closed
South Side Lions Senior Center (Council District 3)	3303 Pecan Valley Dr	210.207.1760	78210	Senior Center	Mon. - Fri. 7:00 am - 4:00 pm; Sat. - Sun. Closed
West End Park Senior Center (Council District 1)	1226 NW 18th Street	210.207.1719	78207	Senior Center	Mon. - Fri. 7:00 am - 4:00 pm; Sat. - Sun. Closed
Willie M. Cortez Senior Center (Council District 4)	5512 SW Military Dr	210.207.5294	78242	Senior Center	Mon. - Fri. 7:00 am - 4:00 pm; Sat. - Sun. Closed